§170.315(g)(2) Automated measure calculation

2015 Edition CCGs

Version 2.3 Updated on 06-15-2020

Revision History

Version #	Description of Change	Version Date
1.0	Initial Publication	02-05-2016
1.1	Added clarification on which Health IT Modules must test to the eligible professional (EP)/eligible clinician (EC) Individual, EC Group, and eligible hospital (EH)/critical access hospital (CAH) tests. Clarified when actions must occur to increment the numerator.	10-21-2016
1.2	Added references to the Quality Payment Program (QPP). Added clarification on deduplication of patients and the transitive effect for the numerator on the EC Individual and Group calculation methods. Added information about the self-testing option. Modified the information on when actions must occur to populate the numerator based on recent The Centers for Medicare & Medicaid Services (CMS) guidance.	01-04-2017
1.3	Added clarification on Health IT Module's capability requirements on recording Taxpaye Number (TIN)/ national provider identifier (NPI) combinations. Added clarification on confirmation of receipt of a C-CDA by a receiving provider prior to numerator. Added links to measure-specific guidance.	03-17-2017
1.4	Added clarification for patient education materials, Meaningful Use Stage 3 Objective 5	07-07-2017

	automated measure calculation eligibility.	
1.5	Provided additional clarification for the patient-specific education measure regarding provider ability to configure systems based on patient information.	08-25-2017
1.6	Added clarification on numerator inclusion for the patient-specific education measure, which provides certification guidance for the use of automation in the provision of patient-specific education materials.	09-29-2017
1.7	Added clarification about flexibility for testing this criterion and developer expectations for measures to which the transitive effect applies when the Health IT Module is unable to differentiate actions at the TIN/NPI level.	02-01-2018
1.8	Added clarification that both the EC Individual and EC Group calculation methods must be tested by a Health IT Module supporting the ACI and/or the ACI Transition calculation method(s). Modified the timely access requirement for the ACI Patient Access measure based on a CMS policy change per the QPP CY 2018 final rule (82 FR 53568). Modified the information on when actions must occur to populate the numerator for Stage 3 measures starting in 2019 based on 2019 inpatient prospective payment systems (IPPS) Final Rule. Modified the name of the EHR Incentive Program to the Promoting Interoperability Program. Updated the Measure-Specific Guidance from CMS.	08-17-2018
1.9	Modified the name of the Advancing Care Information Transition and Advancing Care Information measures to Promoting Interoperability	12-07-2018

	Transition and Promoting Interoperability. Modified the information on when actions must occur to populate the numerator for Promoting Interoperability measures starting in 2019 based on the 2019 Physician Fee Schedule final rule.	
2.0	Added a link to CMS FAQs on the new Medicare Promoting Interoperability opioid measures for eligible hospitals in 2019.	02-28-2019
2.1	Added a link to CMS FAQs on the new Medicare Promoting Interoperability Support Electronic Referral Loops by Receiving and Incorporating Health Information measure for eligible hospitals in 2019.	04-26-2019
2.2	Added text noting that the previously published CMS FAQs on the new opioid measures and the Support Electronic Referral Loop apply in the Promoting Interoperability performance category of the Merit-based Incentive Payment System (MIPS).	09-30-2019
2.3	Based on the sunsetting of the 2014 Edition in the Cures Final rule explanations and clarifications related to Modified Stage 2 and ACI Transition were removed. Made changes to the naming terminology to align with CMS program updates including modifying the measure naming convention from Stage 3 to Medicare and/or Medicaid Promoting Interoperability Programs.	06-15-2020

Regulation Text

Regulation Text

§170.315 (g)(2) *Automated measure calculation—*

For each Promoting Interoperability Programs percentage-based measure that is supported by a capability included in a technology, record the numerator and denominator and create a report including the numerator, denominator, and resulting percentage associated with each applicable measure.

Standard(s) Referenced

None

Certification Companion Guide: Automated measure calculation

This Certification Companion Guide (CCG) is an informative document designed to assist with health IT product development. The CCG is not a substitute for the 2015 Edition final regulation. It extracts key portions of the rule's preamble and includes subsequent clarifying interpretations. To access the full context of regulatory intent please consult the 2015 Edition final rule or other included regulatory reference. The CCG is for public use and should not be sold or redistributed.

Link to Final Rule Preamble

Edition Comparision	Gap Certification Eligible	Base EHR Definition	In Scope for CEHRT Definition
Revised	No	Not Included	Yes

Certification Requirements

This certification criterion was adopted at § 170.315(g)(2). Quality management system (§ 170.315(g)(4)) and accessibility-centered design (§ 170.315(g)(5)) need to be certified as part of the overall scope of the certificate issued to the product.

- When a single quality management system (QMS) is used, the QMS only needs to be identified once. Otherwise, the QMS' need to be identified for every capability to which it was applied.
- When a single accessibility-centered design standard is used, the standard only needs to be identified once. Otherwise, the accessibility-centered design standards need to be identified for every capability to which they were applied; or, alternatively the developer must state that no accessibility-centered design was used.

Measure-Specific Guidance from CMS

- Medicare Promoting Interoperability Program and Dual Eligible Hospitals for 2019
- Medicaid Medicare Promoting Interoperability Program -only EH for 2019
- Medicaid Promoting Interoperability Program EP for 2019
- Medicare EC Merit-based Incentive Program System (MIPS) Promoting Interoperability Performance Category for 2020

Table for Design and Performance

- Quality management system (§ 170.315(g)(4))
- Accessibility-centered design (§ 170.315(g)(5))

Technical Explanations and Clarifications

Applies to entire criterion

Technical outcome – A user can create a report that includes the numerator, denominator, and resulting percentage for each applicable percentage-based Promoting Interoperability Programs measure supported.

Clarifications:

- There is no standard required for this certification criterion.
- The gap certification eligibility of this criterion at § 170.315(g)(2) depends on any modifications to the certification criteria to which this criterion applies and relevant Medicare and Medicaid Promoting Interoperability Programs objectives and measures.
- ONC administers the ONC Health IT Certification Program; CMS administers the Promoting Interoperability and Quality Payment Programs. Questions regarding requirements for the Promoting Interoperability and Quality Payment Programs should be directed to CMS.

- ONC has issued an FAQ (#50) on testing and certification for the 2014 Edition automated numerator recording (§ 170.314(g)(1)) and automated measure calculation (§ 170.314(g)(2)) certification criteria for measures which are no longer included in the Promoting Interoperability criteria based for EHR reporting periods in 2015-2017 based on updates included in the CMS final rule. [see also 80 FR 62761, 80 FR 62785, 80 FR 62875] Although this FAQ references the 2014 Edition certification criteria for automated numerator recording and automated measure calculation, the policy applies to testing and certification for the 2015 Edition automated numerator recording (§ 170.315(g)(1)) and automated measure calculation (§ 170.315(g)(2)) certification criteria if the Health IT Module will be used to report on measures in 2016 and 2017.
  - The following measures are no longer applicable for CMS Promoting Interoperability Programs:
    - Demographics
    - Vital signs
    - Smoking status
    - Clinical summaries
    - Incorporate lab results
    - Patient reminders
    - Electronic notes
    - Imaging
    - Family health history
    - Problem list
    - Medication list
    - Medication allergy list
    - Advance directives
    - Electronic medication administration record (eMAR)
    - Send labs from EH to EP
    - CPOE Medications (EH and EC only)
    - CPOE Laboratory (EH and EC only)
    - CPOE Radiology/Diagnostic Imaging (EH and EC only)
- Please refer to CMS' Promoting Interoperability Programs webpage and Quality Payment Program webpage for more resources on specific measures.
- Three Medicaid Promoting Interoperability Program measures are eligible for gap certification: 1) Required Test 10 – CPOE Medications ; 2) Required Test 11 – CPOE Laboratory; and 3) Required Test 11 – CPOE Radiology/Diagnostic Imaging.
- The test for (g)(2) does not require a live demonstration of recording data and generating reports. Health IT developers may self-test their Health IT Modules(s) and submit the resulting reports to the ONC-ATL to verify compliance with the criterion. The test procedure specifies what reports must be submitted for each Required Test, as well as what the tester must verify within each report.
- Health IT Modules are required to de-duplicate test patients when aggregating together data for the Eligible Clinician (EC) Group calculation method.
- Health IT Modules that are testing for the MIPS Promoting Interoperability performance category calculation method must test for both the EC Individual and EC Group calculation methods.
- Health IT Modules that are testing for the EC Individual and EC Group calculation methods are required to be able to record an EC's TIN. Further, they are also required to be able to associate a single NPI with multiple TINs within a single instance, database, etc. of the Health IT Module. Health IT Modules that are testing for the Individual EP calculation method only are not required to record TIN or be able to associate a single NPI to multiple TINs.
- For the EC Individual and Group calculation methods, actions that accrue to the numerator have a transitive effect across all of the TINs that an individual NPI is included in. For example, if an EC provides patient education materials to a patient under TIN A, they will receive credit in the numerator for TIN B as long as the same NPI is used in both TINs and the same Health IT Module (i.e. same database, instance, etc.) is used. The test data reflects this transitive effect.
- The capability for technology to populate the numerator before, during, and after the reporting/performance period depends on the numerator and denominator statements for the Promoting Interoperability measure. Developers should refer to the numerator and denominator statements in the measure specification sheets provided by CMS' Promoting Interoperability Programs webpage to determine the reporting/performance period technology needs to support. Regardless of whether an action must occur during the reporting/performance period or can occur outside of the reporting/performance period, all actions must occur during the calendar year of the reporting/performance period.
  - Starting in 2019, CMS has clarified that the numerator for the Medicare Promoting Interoperability Program EH/CAH measures is constrained to the EHR reporting period. The numerator action therefore must take place during the reporting period. Actions occurring outside of the reporting period, including after the calendar year will not count in the numerator.
  - Starting in 2019, a MIPS Promoting Interoperability performance category Measure numerator and denominator is constrained to the performance period chosen, with the exception of the Security Risk Analysis measure which may occur any time during the calendar year.
- It is possible for the action of "record" in this certification criterion to be implemented in different ways. For example, "record" could comprise the ability of a centralized analytics Health IT Module to accept or retrieve raw data from another Health IT Module or Health IT Modules. Other possible methods could include a Health IT Module that accepts or retrieves raw data, analyzes the data, and then generates a report based on the analysis; a Health IT Module that separately tracks each capability with a percentage-based Promoting Interoperability measure and later aggregates the numbers and generates a report; or an integrated bundle of Health IT Modules in which each of the Health IT Modules that is part of the bundle categorizes relevant data, identifies the numerator and denominator and calculates, when requested, the percentage associated with the applicable Promoting Interoperability Programs measure. In each of these examples, the action of "record"

means to obtain the information necessary to generate the relevant numerator and denominator. [see also FAQ #20]

- What is required for certification for this criterion depends on the type of flexibility identified by CMS.
  - In some cases, CMS identifies certain measurement flexibilities that are limited to "either/or" options. In these cases, technology presented for certification must be able to calculate the percentage based on both identified options.
  - In cases where CMS has identified measurement flexibilities that are open-ended and dependent on a unique decision by an EP, EC, eligible hospital, or CAH at the practice/organization-level for a given EHR reporting period (such as: excluding certain orders from the CPOE measure because they are protocol/standing orders), then the technology presented for certification is not required to support every possible method of calculation in order to meet this certification criterion. Rather, the technology must support at least one calculation method for a certification criterion, as long as the technology supports all distinct options for measurement (such as including controlled substances in the eRx measure or not). We strongly encourage technology developers to work with their clients and to incorporate as many of these practice/organization-level open-ended flexibilities in the technology as appropriate to make the Promoting Interoperability measures as relevant as possible to their clients' scopes of practice. [77 FR 54244–54245 and ONC FAQ #32]
- We also apply to this 2015 Edition "automated measure calculation" criterion the clarification and guidance included for certification to the 2014 Edition "automated measure calculation" criterion in the 2014 Edition Release 2 rulemaking [79 FR 10920 and 54445].
  - A Health IT Module may be certified to only the "automated measure calculation" certification criterion (§ 170.315(g)(2)) in situations where the Health IT Module does not include a capability that supports a Promoting Interoperability Program percentage-based measure, but can meet the requirements of the "automated measure calculation" certification criterion.
  - An example of this would be an "analytics" Health IT Module where data is fed from other health IT, and the Health IT Module can record the requisite numerators, denominators and create the necessary percentage report as specified in the "automated measure calculation" certification criterion.
- ONC-ACBs can certify a Health IT Module to either § 170.315(g)(1) or (g)(2) per FAQ #28. ONC-ACBs should refer to the scenarios outlined in FAQ #28 for further details.
- The Support Electronic Referral Loops by Sending Health Information measure for the Medicare and Medicaid Promoting Interoperability Programs, and the MIPS Promoting Interoperability performance category require that the EP/EC/EH/CAH confirm receipt of the summary of care by the referred to provider in order to increment the numerator. The test data tests this baseline requirement by requiring that a Health IT Module demonstrate confirmation of receipt before incrementing the numerator. ONC does not require a specific method Health IT Modules should use to confirm receipt. Health IT Modules could use a number of methods, including but not limited to, the Direct Message Disposition Notification, a check box, report verifications, etc.
- The test data used for this criterion is supplied by ONC and is organized into 5 Test Data scenarios, with a single set of 12 Test Cases. Health IT developers are required to use the ONC-supplied test data and may not modify the test case names.
- The Medicare and Medicaid Promoting Interoperability Provide Patients Electronic Access to Their Health Information measure requires that two conditions be met in order to increment/populate the numerator: patient data must be available to view, download, or transmit AND it must be available to an API within 48 hours (EP) or 36 hours (EH/CAH). The MIPS Promoting Interoperability performance category Provide Patients Electronic Access to Their Health Information measure requires that two conditions be met in order to increment/populate the numerator: patient data must be available to view, download, or transmit AND it must be available to an API within 4 business days (EC). As such, Health IT Modules certified to only (e)(1) or certified to only (g)(8), (g)(9) or (g)(10) will be required to demonstrate that the product increments the denominator for the condition for which they are certified. For example, if the Test Case indicates that only view, download, or transmit was met, the numerator will increment for products certified to (e)(1) but will not increment for products certified to (g)(8), (g)(9) or (g)(10). Health IT Modules certified for (e)(1) AND (g)(8), (g)(9) or (g)(10) will be expected to increment the numerator as the measure specifies. Health IT Modules certified to only (e)(1) or certified to only (g)(8) (g)(9) or (g)(10) will be required to provide documentation during testing that demonstrates how the Health IT Module performs the calculation for its "portion" of the measure as a condition of passing testing. This documentation must also be made available with the health IT developer's transparency statement regarding costs and limitations. Documentation should enable Eligible Professionals, Eligible Clinicians, Eligible Hospitals, and Critical Access Hospitals to determine how to correctly add together the numerator and denominator from systems providing each of the capabilities.
- EH/CAH/EP Medicaid Promoting Interoperability Program patient education measure requires that patient educational material identified by the patient rather than the provider do not qualify for inclusion in the automated measure calculation. Providers may configure their health IT to automatically make available patient education materials based on patient-specific information. For numerator inclusion, the automated provision of patient-specific education materials must demonstrate that the health care provider can determine the clinical relevance of such materials, either at a clinician level, provider organization level, or both.
- CMS has issued FAQ 22521 regarding the application of the transitive effect to certain MIPS Promoting Interoperability performance category measures. For the purposes of testing to this criterion, the test data is structured to differentiate actions between TIN/NPI combinations. However, Health IT Modules that are not able to differentiate actions between TIN/NPI combinations for the measures to which the transitive effect applies are not required to demonstrate this capability. ONC-ATLs may offer flexibility during testing regarding the transitive effect and focus on the outcome to ensure the correct numerator and denominator are calculated by the Health IT Module. At a minimum, developers of Health IT Modules unable to differentiate actions at the TIN/NPI level for those measures to which the transitive effect applies must provide sufficient documentation and explanation of alternate workflows to the ONC-ATL to demonstrate how actions taken by a provider relate to the numerator and denominator. Health IT developers must also provide documentation to providers on configuration and the logic for properly using the "automated measure calculation" functionality, including details on how the developer has implemented the transitive effect policy.

- CMS has issued a series of FAQs that provide additional guidance on the new Medicare Promoting Interoperability Program opioid measures for EHs in 2019: Query of Prescription Drug Monitoring Program, and Verify Opioid Treatment Agreement. The FAQs also apply in 2019 for the new opioid measures in the MIPS Promoting Interoperability performance category.
- CMS has issued a series of FAQs that provide additional guidance on the new Medicare Promoting Interoperability Program measure for EHs in 2019: Support Electronic Referral Loops by Receiving and Incorporating Health Information measure. The FAQs also apply in 2019 for the Support Electronic Referral Loops by Receiving and Incorporating Health Information measure in the MIPS Promoting Interoperability performance category.

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